

## Stan A. Huber Consultants, Inc.

Health Physics and Radiation Safety Services

200 North Cedar Road - New Lenox, Illinois 60451-1751 - (800) 383-0468 or (815) 485-6161 - FAX (815) 485-4433 - Email sahci@sahci.com - Home Page www.sahci.com

November 15, 2014

Kara Pellaton Magellan Development Group, LLC 225 N. Columbus Drive, Suite 100 Chicago, IL 60601

RE: Lakeshore East "Building C" Thorium Monitoring on November 7, 2104

Dear Ms. Pellaton:

Stan A. Huber Consultants, Inc (SAHCI) was hired by your firm to monitor for potential thorium contamination during the drilling of geotechnical borings at the Lakeshore East Development in Chicago, Illinois. The monitoring was performed on November 7, 2014.

### Instrumentation

Surface gamma scans were performed by Kyle Smith using a Ludlum Model 2221 Scaled / Ratemeter (serial no. 126479) with attached 2"x2" Nal probe. The instrument was calibrated on October 17, 2014. The USEPA action level of 7.1 picocuries per gram (pCi/g) total thorium for this instrument is 18,193 counts per minute (cpm).

The average background count rate for this location was found to be between 4,200 and 4,800 cpm.

#### Soil Gamma Scans

Gamma surface scans were performed using the Ludlum Model 2221 Scaler / Ratemeter described above. Data was collected after each 5 foot drill depth and recording the highest count rate for each section of cuttings to an excavation depth of 30 feet. Soil removed from the excavation was backfilled on the same day.

The maximum gamma count rate for each 5 foot cutting was recorded on the attached Radiation Survey Form. The count rates in the excavation ranged from 4,600 cpm to 6,300 cpm. No count rates were found at any time that exceeded the threshold limit of 18,193 cpm.

Gamma surface scans were also performed on locations C13 and C13B that were drilled on November 3, 2014. The data was collected by surveying 10 feet around each location on the surface and recording the highest count rate. The surface count rates are recorded on the attached Radiation Survey Form.

### **Additional Monitoring**

Since no count rates were identified above the 7.1 pCi/gram threshold limit, no additional soil sampling, air monitoring, or personnel monitoring were performed.

Thank you for your assistance with this project. If you have any questions or need additional information please call me at (815) 485-6161.

Sincerely,

Stan A. Huber Consultants, Inc.

Glenn Huber, CHP

President



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# Radiation Survey Form

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Date: November 7, 2014

Inst Model: 2221

Probe Type: 1"x1" Nal / 2"x2" Nal Shielded / Not Shielded

Lift Elevation: 5usface - "30"

Background 4200 - 4,500 cpm Action Level: 18,193 cpm €.

Write grid designations in circles. Record highest counts for grid in cpm. Record 30 second counts

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at grid intersections (if required). Shade areas of elevated counts and record max cpm. N scale 80 side walk C13C CI3 Surface = 4,400 cpm FIELD SURFACE = 4000 CPM SURPACE = 4,200 CPM -\$ 0 = 4,600 CPM -10.0 = 4,700 cpm -15.0 = 5.000 Cpm -20.0= 5,400 cpm -25.0 = 5,200 CPM -30.0= 6,300 Cpm • ← C13C 20